In the Claims:

Please cancel claims 1-23. Please add new claims 24-42. The claims are as follows.

1-23. (Canceled)

24. (New) An optical transmission method, comprising:

transmitting an optical signal within an integrated circuit from a first optical transmitter to a first optical receiver, said integrated circuit comprising a first glass layer that includes the first optical transmitter and a first redirection termination, a second glass layer that includes the first optical receiver and a second redirection termination, a first metal layer disposed between the first glass layer and the second glass layer, and an optical channel extending from the first redirection termination to the second redirection termination and traversing the first metal layer, said first glass layer, said second glass layer, and said optical channel each comprising optical fibers for transmission of the optical signal, said optical signal being transmitted:

in a first direction in the first glass layer from the first optical transmitter to the first redirection termination;

in a second direction in the optical channel from the first redirection termination to the second redirection termination, said second direction being oriented perpendicular to the first direction; and

in a third direction in the second glass layer from the second redirection termination to the first optical receiver, said third direction being oriented perpendicular to the second direction and parallel to the first direction.

25. (New) The method of claim 24, wherein the optical fibers of the first glass layer, the second glass layer, and the optical channel each comprise a same material.

26. (New) The method of claim 24, wherein the first redirection termination is slant-shaped, the second redirection termination is slant-shaped, or both the first redirection termination and the second redirection termination are slant-shaped.

27. (New) The method of claim 24, wherein the first redirection termination is curved, the second redirection termination is curved, or both the first redirection termination and the second redirection termination are curved.

28. (New) The method of claim 24, wherein the first redirection termination is hemispherical-shaped, the second redirection termination is hemispherical-shaped, or both the first redirection termination and the second redirection termination are hemispherical-shaped.

29. (New) The method of claim 24, wherein the first redirection termination is cone-shaped, the second redirection termination is cone-shaped, or both the first redirection termination and the second redirection termination are cone-shaped.

30. (New) The method of claim 24, wherein the first optical receiver uses a lens to gather the optical signal.

31. (New) The method of claim 24, wherein the first optical transmitter comprises an LED.

32. (New) The method of claim 24, wherein the first glass layer is coated with a non-reflective material that is non-reflective with respect to the optical signal.

33. (New) The method of claim 24, wherein a density of the optical fibers in the first glass layer differs from a density of the optical fibers in the second glass layer.

34. (New) An optical transmission method, comprising:

sending an address of a second core and control signals from a first core to a first optic controller, wherein an integrated circuit comprises the first core, the first optic controller connected to the first core, a plurality of optical transmitters under control of the first optic controller, a second core, a second optic controller connected to the second core, a plurality of optical receivers under control of the second optic controller, and a plurality of optical channels, wherein each optical channel extends from one of the optical transmitters to one of the optical receivers;

decoding, by the first optic controller, the address;

after said decoding, selecting a first optical channel of the plurality of optical channels for subsequently transmitting an optical signal over the first optical channel, wherein the first optical channel extends from a first optical transmitter of the plurality of optical transmitters and a first optical receiver of the plurality of optical receivers, and wherein said selecting is performed by the first optic controller;

after said selecting, transmitting data from the first optic controller to the first optical transmitter;

encoding into optical data, by the first optical transmitter, the transmitted data; and

transmitting the optical data from the first optical transmitter to the first optical receiver via the first optical channel.

35. (New) The method of claim 34, wherein said selecting takes into account a channel length of each optical channel of the plurality of optical channels.

36. (New) The method of claim 34, wherein said selecting takes into account one or more defective optical channel of the plurality of optical channels.

36. (New) The method of claim 34, wherein the method further comprises after said transmitting the optical data: handshaking between the first optical transmitter and first optical receiver to communicate between the first optical transmitter and first optical receiver such that said transmitting the optical data was successful, wherein the handshaking comprises exchanging messages between the optical transmitter and first optical receiver over a second optical channel of the plurality of optical channels.

37. (New) The method of claim 34, wherein the method further comprises:

detecting a collision with the optical data during said transmitting the optical data; and

responsive to said detecting, re-transmitting the optical data from the first optical

transmitter to the first optical receiver via a second optical channel of the plurality of optical channels.

38. (New) The method of claim 34, wherein the first optical channel comprises a first optic channel oriented in a first direction, a second optic channel segment oriented in a second direction that is perpendicular to the first direction, and a redirection termination disposed between the first and second optic channels for causing the optical data propagating in the first optic channel in the first direction to be diverted into the second optic channel to propagate in the second optic channel in the second direction.

39. (New) The method of claim 38, wherein the redirection termination is slant-shaped.

40. (New) The method of claim 38, wherein the redirection termination is curved.

41. (New) The method of claim 38, wherein the redirection termination is hemispherical-shaped.

42. (New) The method of claim 38, wherein the redirection termination is cone-shaped.